

WHAT IS CLAIMED IS:

1. A system for treating wastewater from a building including a fresh water inlet and a wastewater outlet connected to a septic tank; said system comprising:

a wastewater sanitization assembly including:

- a first sanitization module provided downstream from the septic tank;
- a second sanitization module provided downstream from said first sanitization module;

a control assembly including:

- a controller;
- a fresh water sensor associated with the fresh water inlet and connected to said controller to supply fresh water entry data to said controller;
- a first reservoir to contain a first wastewater treatment solution;
- a first pump controlled by said controller and provided between said first reservoir and the wastewater outlet;
- a second reservoir to contain a second wastewater treatment solution;
- a second pump controlled by said controller and provided between said second reservoir and said second sanitization module;

wherein said controller controls said first and second pumps so that a) a quantity of the first wastewater treatment solution supplied to said wastewater outlet is a function of the sensed freshwater entering said building; and b) a quantity of the second wastewater treatment solution supplied to said second sanitization module is a function of the sensed freshwater entering said building.

2. The wastewater treatment system of claim 1, wherein said first wastewater treatment solution contains at least one element selected from the group consisting of enzymes and bacteria.

3. The wastewater treatment system of claim 1, wherein said second wastewater treatment solution contains an aseptic solution.

4. The wastewater treatment system of claim 1, wherein said control assembly also includes a valve controlled by the controller and provided between a compressed air source and said second sanitization module; and said second sanitization module includes at least one air diffuser connected to said valve.

5. The wastewater treatment system of claim 1, wherein said control assembly also includes a valve controlled by the controller and provided between a compressed air source and said first sanitization module; and said first sanitization module includes at least one air diffuser connected to said valve.

6. The wastewater treatment system of claim 1, wherein said first sanitization module includes:

- a body;

- a generally vertical container provided with a bottom inlet and at least one peripheral outlet aperture; said container being mounted in said body

- a plurality of bio-media elements provided in said container;

- a filtering pouch enclosing said vertical container;

whereby a) wastewater entering said bottom inlet of said first sanitization module percolates through said bio-media elements before exiting the container via said at least one peripheral outlet aperture; and b) wastewater exiting said container via said at least one peripheral aperture is filtered through said filtering pouch.

7. The wastewater treatment system of claim 1, wherein said second sanitization module includes:

- a body;

- a generally vertical container provided with a bottom inlet and at least one peripheral outlet aperture; said container being mounted in said body;

- a filtering pouch enclosing said vertical container;

whereby a) wastewater entering said bottom inlet of said first sanitization module percolates through said bio-media elements before exiting the container via said at

least one peripheral outlet aperture; and b) wastewater exiting said container via said at least one peripheral aperture is filtered through said filtering pouch.

8. The wastewater treatment system of claim 1, wherein said control assembly also includes:

- an intermediate mixing reservoir provided between said second pump and said second sanitization module;

- a third pump provided between said intermediate mixing reservoir and said second sanitization module; said third pump being controlled by said controller;

- a fourth pump provided between said second sanitization module and said intermediate mixing reservoir; said fourth pump being controlled by said controller;

wherein said fourth pump transfers treated wastewater from said second sanitization module to said intermediate mixing reservoir to dilute said second treatment solution pumped in said intermediate mixing reservoir by said second pump; and said third pump returns the diluted second treatment solution to said second sanitization module.

9. The wastewater treatment system of claim 8, wherein said control assembly also includes a water quality testing apparatus associated with said intermediate mixing reservoir to test the quality of the treated wastewater pumped from the second sanitization module by said fourth pump.

10. A method for treating wastewater from a building including a fresh water inlet and a wastewater outlet connected to a septic tank, said method comprising the acts of :

- measuring a quantity of fresh water entering the building;

- providing a first sanitization module downstream from the septic tank;

- providing a second sanitization module downstream from the first sanitization module;

dispensing a quantity of a first wastewater treatment solution to the wastewater outlet; the quantity of the first wastewater treatment solution dispensed being a function of the measured quantity of fresh water entering the building; and

dispensing a quantity of a second wastewater treatment solution to the second sanitization module; the quantity of the second wastewater treatment solution dispensed being a function of the measured quantity of fresh water entering the building.

11. The wastewater treatment method of claim 10, wherein said first wastewater treatment solution dispensing act includes dispensing a solution containing at least one element selected from the group consisting of bacteria and enzymes.

12. The wastewater treatment method of claim 10, wherein said second wastewater treatment solution dispensing act includes dispensing an aseptic solution.

13. The wastewater treatment method of claim 10, further comprising the act of supplying compressed air to at least one of said first and second sanitization modules.

14. A system for treating wastewater from a building including a fresh water inlet and a wastewater outlet; said system comprising:

a sanitization assembly having an inlet connected to the wastewater outlet of the building and a treated wastewater outlet;

a controller;

a sensor associated with said sanitization assembly and connected to said controller to supply thereto data indicative of a quantity of wastewater present in the sanitization assembly;

an output pump controlled by said controller and having an inlet connected to said treated wastewater outlet and an outlet connected to the environment;

wherein, when said sensor indicates that the quantity of wastewater in said sanitization assembly has reached a predetermined level, said controller controls said

output pump so as to eject a predetermined amount of treated wastewater from the sanitization assembly to the environment.

15. The system for treating wastewater of claim 14 comprising:
a first reservoir to contain a first wastewater treatment solution;
a first wastewater treatment solution pump provided between said first reservoir and said sanitization assembly;

wherein, when said sensor indicates that the quantity of wastewater in said sanitization assembly has reached a predetermined level, said first wastewater treatment solution pump injects a predetermined amount of the first wastewater treatment solution in the sanitization assembly.

16. The system for treating wastewater of claim 15, wherein said sanitization assembly includes:

a septic tank having an inlet connected to the building wastewater outlet and an outlet;

a first sanitization module having an inlet connected to said outlet of said septic tank and an outlet; and

a second sanitization module having an inlet connected to said outlet of said first sanitization module and an outlet defining said treated wastewater outlet.

17. The system for treating wastewater of claim 16, wherein said sensor is a float-type sensor associated with one of the septic tank, the first sanitization module and the second sanitization module.

18. The system for treating wastewater of claim 16, further comprising a compressed air source connected to at least one of said septic tank, said first sanitization module and said second sanitization module via an air valve controlled by said controller.

19. The system for treating wastewater of claim 18, further comprising at least one air diffuser provided in at least one of said septic tank, said first sanitization

module and said second sanitization module; said at least one air diffuser being connected to said compressed air source via said valve.

20. The system for treating wastewater of claim 16, wherein said first sanitization module includes:

- a body;

- a generally vertical container provided with a bottom inlet and at least one peripheral outlet aperture; said container being mounted in said body;

- a plurality of bio-media elements provided in said container;

- whereby wastewater entering said bottom inlet of said vertical container percolates through said bio-media elements before exiting said vertical container via said at least one peripheral outlet aperture.

21. The system for treating wastewater of claim 16, wherein said first sanitization module includes:

- a body;

- a generally vertical container mounted in said body downstream from said inlet and upstream from said outlet of said first sanitization module, said container including a plurality of inlet apertures and a plurality of outlet apertures, said container dividing said body into two compartments; and

- a plurality of bio-media elements provided in said container;

- whereby wastewater entering said inlet apertures of said container pass through said bio-media elements before exiting said container via said outlet apertures.

22. The system for treating wastewater of claim 16, wherein said second sanitization module includes:

- a body;

- a generally vertical container provided with a bottom inlet and at least one peripheral outlet aperture; said container being mounted in said body;

whereby wastewater entering said bottom inlet of said vertical container percolates through said bio-media elements before exiting said container via said at least one peripheral outlet aperture.

23. The system for treating wastewater of claim 16, further comprising a fluid circulating pump having an inlet connected to said second sanitization module and at least one outlet connected to at least one of said septic tank, said first sanitization module and said second sanitization module for recirculating wastewater.

24. The system for treating wastewater of claim 16, further comprising:
a second reservoir to contain a second wastewater treatment solution;
a second wastewater treatment solution pump provided between said output pump outlet and said environment; said second wastewater treatment solution pump being controlled by said controller;

wherein when said output pump ejects a predetermined amount of treated wastewater from the sanitization assembly to the environment, said second wastewater treatment solution pump injects a predetermined amount of the second treatment solution to the treated wastewater ejected.

25. The system for treating wastewater of claim 24, wherein said second wastewater treatment solution includes an aseptic solution.

26. The system for treating wastewater of claim 24, further comprising a three-way valve including an inlet connected to said outlet of said output pump, a first outlet connected to at least one of said septic tank, said first sanitization module and said second sanitization module for recirculating wastewater and a second outlet connected to said second wastewater treatment solution pump; wherein said three-way valve is so controlled by said controller as to direct the flow of wastewater from the outlet of the output pump either to the second wastewater treatment solution pump and to at least one of said septic tank, said first sanitization module and said second sanitization module.

27. The system for treating wastewater of claim 15, wherein said first wastewater treatment solution pump includes a ventury-effect element.

28. The system for treating wastewater of claim 24, wherein said second wastewater treatment solution pump includes a ventury-effect element.

29. The system for treating wastewater of claim 16, wherein said first wastewater treatment solution contains at least one element selected from the group consisting of enzymes and bacteria.

30. The system for treating wastewater of claim 24, further comprising a mixer provided between said second wastewater treatment solution pump and said environment for mixing the second wastewater treatment solution and the ejected treated wastewater.

31. The system for treating wastewater of claim 15, wherein said sensor includes a fresh water sensor associated with the fresh water inlet.

32. A method for treating wastewater from a building including a fresh water inlet and a wastewater outlet connected to a sanitization assembly having a treated wastewater outlet, said method comprising the acts of:

measuring a parameter indicative of a quantity of wastewater present in the sanitization assembly; and

upon reaching a predetermined value of the parameter:

ejecting a predetermined amount of treated wastewater to the environment via the treated wastewater outlet; and

injecting a quantity of a first wastewater treatment solution in the sanitization assembly, the quantity of the first wastewater treatment solution being a function of the predetermined amount of treated wastewater ejected to the environment.

33. A method for treating wastewater as defined in claim 32, wherein said first wastewater treatment solution dispensing act includes dispensing a solution including an element selected from the group comprising bacteria and enzymes.

34. A method for treating wastewater as defined in claim 32, further comprising the act of dispensing a quantity of a second wastewater treatment solution to the treated wastewater as it is ejected via the treated wastewater outlet.

35. The method for treating wastewater of claim 34, wherein said second wastewater treatment solution dispensing act includes dispensing an antiseptic containing solution.